## UNITED STATES DISTRICT COURT NORTHERN DISTRICT OF TEXAS DALLAS DIVISION

KUSTOM SIGNALS, INC.,

Plaintiff.

v.

APPLIED CONCEPTS, INC.,

Defendant.

Case No. 3:23-cv-1937

**Jury Trial Demanded** 

### COMPLAINT FOR PATENT INFRINGEMENT

Kustom Signals, Inc., for its Complaint against Applied Concepts, Inc., states and alleges as follows:

#### NATURE OF THE ACTION

- 1. This is an action arising under Title 35 of the United States Code for direct and indirect infringement of U.S. Patent No. 11,194,039 ("the '039 Patent") and U.S. Patent No. 11,703,602 ("the '602 Patent"). Kustom Signals is the owner by assignment of the patents-in-suit, both of which are directed to a traffic radar system with patrol vehicle speed detection.
- 2. Applied Concepts has sold, offered to sell, and, on information and belief, made, used, and/or imported radar speed-detection equipment that infringes at least claim 9 of each of the patents-in-suit.
- 3. Applied Concepts has also induced infringement of the patents-in-suit by others by selling, offering to sell, and/or importing components that can be used to

modify existing speed-detection products so they infringe at least claim 9 of each of the patents-in-suit.

4. Additionally, Applied Concepts has contributed to the infringement of the patents-in-suit by selling, offering to sell, and/or importing components of speed-detection products that infringe at least claim 9 of each of the patents-in-suit.

## PARTIES, JURISDICTION, AND VENUE

- 5. Kustom Signals is a Kansas corporation with a principal place of business at 10901 West 84th Terrace, Suite 100, Lenexa, Kansas 66214.
- 6. On information and belief, Applied Concepts is a Texas corporation with a principal place of business at 855 East Collins Boulevard, Richardson, Texas 75081.
- 7. This Court has subject-matter jurisdiction over this action for patent infringement pursuant to 28 U.S.C. §§ 1331 and 1338(a).
- 8. This Court has personal jurisdiction over Applied Concepts because Applied Concepts is incorporated in Texas, maintains a principal place of business in this District and, on information and belief, has made, used, sold, and/or offered to sell infringing instrumentalities and/or sold, offered to sell, and/or imported components of infringing instrumentalities in this District.
  - 9. Venue is proper in this District pursuant to 28 U.S.C. § 1400.

#### **ALLEGATIONS COMMON TO ALL COUNTS**

#### A. Kustom Signals and the Patents-in-Suit

10. Kustom Signals was founded in 1965 as a manufacturer of amplifiers. With its knowledge of electronics, Kustom Signals soon expanded its business to include the

manufacture of public-safety equipment for use by law-enforcement agencies, releasing its first radar speed detector in 1970. Today, Kustom Signals is a worldwide leader in the field, having sold nearly 1 million speed-enforcement products to more than 17,000 law-enforcement agencies in 92 countries.

- 11. On December 7, 2021, the '039 Patent, entitled "Traffic Radar System with Patrol Vehicle Speed Detection," was duly and lawfully issued by the United States Patent and Trademark Office. Kustom Signals is the owner by assignment of all right, title, and interest in and to the '039 Patent, including all right to recover for any and all infringement thereof. The '039 Patent is valid and enforceable. A true copy of the '039 Patent is attached as Exhibit A.
- 12. On July 18, 2023, the '602 Patent, entitled "Traffic Radar System with Patrol Vehicle Speed Detection," was duly and lawfully issued by the United States Patent and Trademark Office. The '602 Patent is a continuation of U.S. Patent No. 11,579,314, which in turn is a continuation-in-part of the '039 Patent. Kustom Signals is the owner by assignment of all right, title, and interest in and to the '602 Patent, including all right to recover for any and all infringement thereof. The '602 Patent is valid and enforceable. A true copy of the '602 Patent is attached as Exhibit B.
- 13. The claims of both patents-in-suit are directed to traffic radar speed-detection systems that include patrol-vehicle speed detectors to help determine target vehicle speeds. These systems typically include a radar transceiver that transmits a radar beam and receives reflections of the radar beam as it bounces off target vehicles. To determine the speed of a target vehicle, the system must also determine the patrol

vehicle's speed, which is then added to or subtracted from the transceiver's raw speed

data depending on whether the patrol vehicle is moving toward or away from the target

vehicle.

14. Prior-art traffic radar speed-detection systems tapped into the patrol vehicle

speed sensor wiring or the patrol vehicle data communications bus to use these vehicle's

speed-detection signals to aid in the determination of the patrol vehicle's speed and

determining certain modes of operation. But connecting a system to the patrol vehicle's

speed-detection electronics can be difficult and time-consuming, and the variety of makes

and models of patrol vehicles use different protocols to output vehicle speed, requiring

the traffic radar system to include multiple software or firmware interfaces.

15. Moreover, many manufacturers of patrol vehicles now void the vehicle

warranty if a traffic radar speed-detection system is connected to the vehicle's electronic

signals, rendering prior-art systems commercially non-viable.

16. The patents-in-suit solve the various problems presented by prior-art

systems by using a Global Navigation Satellite Systems (hereafter "GPS") unit to

determine vehicle speed. Because the GPS unit is independent from the patrol vehicle's

speed-detection electronics, it requires no data input connection to the patrol vehicle and

no specific software or firmware interface to derive patrol vehicle speed. It also preserves

the patrol vehicle's manufacturer warranty.

#### 17. Claim 9 of the '039 Patent recites:

A traffic radar system comprising:

- a first radar transceiver configured to transmit and receive radar beams from a front zone corresponding to an area in front of a patrol vehicle and to generate a first electronic signal corresponding to the received radar beam;
- a second radar transceiver configured to transmit and receive radar beams from a rear zone corresponding to an area behind the patrol vehicle and to generate a second electronic signal corresponding to the received radar beam;
- a speed determining element configured to receive and process radio frequency signals from a global navigation satellite system to determine and output a speed of the patrol vehicle; and
- a processing element configured to
  - receive a plurality of digital data samples derived from one of either the first or second electronic signals,
  - receive the speed of the patrol vehicle from the speed determining element,
  - perform a time domain to frequency domain conversion on the digital data samples creating a plurality of frequency bins, each frequency bin associated with a frequency bin number, having a relative magnitude value, and corresponding to a speed of a vehicle,
  - convert the speed of the patrol vehicle to a frequency bin number,
  - form a patrol vehicle speed window that includes a range of frequency bin numbers having the frequency bin number of the converted patrol vehicle speed as a center of the range,
  - determine at least one group of successive frequency bin numbers outside of the patrol vehicle speed window

whose relative magnitude is greater than a spike threshold value,

convert one frequency bin number in each group to the relative speed of one target vehicle, and

convert the relative speed of the target vehicle to an absolute speed using the speed of the patrol vehicle.

#### 18. Claim 9 of the '602 Patent recites:

A traffic radar system comprising:

- a first radar transceiver configured to transmit and receive radar beams from a front zone corresponding to an area in front of a patrol vehicle or in a rear zone corresponding to an area behind the patrol vehicle and to generate an electronic signal corresponding to the received radar beam;
- a speed determining element configured to receive and process radio frequency signals from a global navigation satellite system to determine and output a speed of the patrol vehicle; and
- a processing element configured to
  - receive a plurality of digital data samples derived from the electronic signal,
  - receive the speed of the patrol vehicle from the speed determining element,
  - perform a time domain to frequency domain conversion on the digital data samples creating a plurality of frequency bins, each frequency bin associated with a frequency bin number, having a relative magnitude value, and corresponding to a speed of a vehicle,
  - convert the speed of the patrol vehicle to a frequency bin number,
  - form a patrol vehicle speed window that includes a range of frequency bin numbers having the frequency bin

number of the converted patrol vehicle speed as a center of the range,

determine at least one group of successive frequency bin numbers outside of the patrol vehicle speed window whose relative magnitude is greater than a spike threshold value,

convert one frequency bin number in each group to the relative speed of one target vehicle, and

convert the relative speed of the target vehicle to an absolute speed using the speed of the patrol vehicle.

### B. Applied Concepts and Its Infringing Speed-Detection System

- 19. Applied Concepts is Kustom Signals' competitor in the market for traffic radar speed-detection systems. Applied Concepts sells competing traffic radar speed-detection systems and accessories using the trade name "Stalker."
- 20. Applied Concepts sells, offers for sale and, on information and belief, makes, uses, and/or imports the Stalker Speed Module (the "Accused Product"), which it touts in its marketing literature as a solution to the same problem addressed by the patents-in-suit:

## The Stalker Speed Module: Inertial Navigation-Powered Vehicle Speed Sensing

Integrating your radar with your vehicle's hard-wired VSS is always the best way to go, but if your late-model patrol vehicles no longer offer easy access to the VSS directly or via an OBD II port, we have the right solution.

The Stalker Speed Module is a small plug-and-play device that installs on the back of your current radar system in under 2 minutes.

The module utilizes Stalker's proprietary Inertial Navigation Technology combined with a Global Positioning System (GPS) satellite receiver to accurately determine vehicle patrol speed. This key technology combination allows the radar unit to maintain precise vehicle speed tracking even in areas where a GPS signal is unavailable (which happens with all GPS receivers from time to time), such as when you are driving around tall buildings, in densely forested areas, while going through tunnels, and during inclement weather.

Of course, the Stalker Speed Module also supports the very popular Stalker Moving/Stationary auto-switching features found on many of our radar units.

Stalker Radar's products are renowned for their longevity. We work hard to keep your Stalker radars on the road, even in the face of rapidly changing vehicle technology and evolving National Highway Traffic Safety Association (NHTSA) regulations.

- 21. Applied Concepts also sells or has sold Stalker radar units under at least the following model names: DSR 2X, DSR, DUAL SL, and PATROL. Used in combination with Applied Concepts' Stalker radar units, with other traffic radar speed-detection units, or as a component of traffic radar speed-detection units, the Accused Product practices all elements of at least claim 9 of the '039 Patent and claim 9 of the '602 Patent. Attached hereto as Exhibit C is a claim chart showing how these two claims cover the Accused Product in combination with one of Stalker's other offerings.
- 22. On May 2, 2022, an attorney for Kustom Signals sent a letter to Applied Concepts notifying it of Kustom Signals' rights in the '039 Patent and in published application 2021/0223410, which would later issue as U.S. Patent No. 11,579,314. A copy of the May 2, 2022 letter is attached as Exhibit D.
- 23. On February 20, 2023, Kustom Signals' attorneys sent a follow-up letter to Applied Concepts notifying it of Kustom Signals' rights in the '039 Patent, in U.S. Patent

No. 11,579,314, and in published application 2022/0317316, which would later issue as the '602 Patent. A copy of the February 22, 2023 letter is attached as Exhibit E.

24. Applied Concepts continues to sell, offer for sale, and, on information and belief, make, use, and/or import the Accused Product.

### COUNT I – DIRECT INFRINGEMENT OF U.S. PATENT NO. 11,194,039

- 25. Kustom Signals incorporates by reference paragraphs 1–24, above, as though fully set forth herein.
- 26. Kustom Signals is the owner by recorded assignment of the '039 Patent, with ownership of all substantial rights therein, including the right to exclude others, to grant licenses, and to sue and recover damages and seek injunctive relief for past and future infringement of the '039 Patent.
- 27. On information and belief, Applied Concepts has directly infringed and continues to directly infringe at least claim 9 of the '039 Patent by, among other things, using, selling, and offering to sell the Accused Product in combination with its own Stalker radar units.
- 28. The Accused Product, used in combination with Applied Concepts' Stalker radar units, comprises at least:
  - a first radar transceiver configured to transmit and receive radar beams from a front zone corresponding to an area in front of a patrol vehicle and to generate a first electronic signal corresponding to the received radar beam;
  - a second radar transceiver configured to transmit and receive radar beams from a rear zone corresponding to an area behind the patrol vehicle and to generate a second

- electronic signal corresponding to the received radar beam;
- a speed determining element configured to receive and process radio frequency signals from a global navigation satellite system to determine and output a speed of the patrol vehicle; and
  - a processing element configured to
  - receive a plurality of digital data samples derived from one of either the first or second electronic signals,
  - receive the speed of the patrol vehicle from the speed determining element,
  - perform a time domain to frequency domain conversion on the digital data samples creating a plurality of frequency bins, each frequency bin associated with a frequency bin number, having a relative magnitude value, and corresponding to a speed of a vehicle,
  - convert the speed of the patrol vehicle to a frequency bin number,
  - form a patrol vehicle speed window that includes a range of frequency bin numbers having the frequency bin number of the converted patrol vehicle speed as a center of the range,
  - determine at least one group of successive frequency bin numbers outside of the patrol vehicle speed window whose relative magnitude is greater than a spike threshold value,
  - convert one frequency bin number in each group to the relative speed of one target vehicle, and
  - convert the relative speed of the target vehicle to an absolute speed using the speed of the patrol vehicle.
- 29. Applied Concepts is therefore liable for direct infringement of the '039 Patent pursuant to 35 U.S.C. § 271(a).

30. As a direct and proximate consequence of Applied Concepts' infringement, Kustom Signals has been, is being, and, unless such acts and practices are enjoined by the Court, will continue to be injured in its business and property rights, and has suffered, is suffering, and will continue to suffer injury and damages for which it is entitled to relief under 35 U.S.C. § 284 adequate to compensate for such infringement, including lost profits, but in no event less than a reasonable royalty.

- 31. Applied Concepts' infringement is further causing and will continue to cause Kustom Signals irreparable harm, for which there is no adequate remedy at law. Unless and until enjoined by this Court, Applied Concepts will continue to infringe the '039 Patent. Under 35 U.S.C. § 283, Kustom Signals is entitled to an injunction against further infringement.
- 32. Additionally, Applied Concepts has received notice and, upon information and belief, knows and has known that its Accused Product infringes at least claim 9 of the '039 Patent.
- 33. On information and belief, Applied Concepts has made no attempt to design around the '039 Patent. Applied Concepts' infringement was undertaken willfully and without permission or license to use the '039 Patent.
- 34. On information and belief, Applied Concepts' infringement of at least claim 9 of the '039 Patent has been willful. Kustom Signals has been damaged as the result of Applied Concepts' willful infringement and seeks increased damages, up to and including treble damages.

- 35. Kustom Signals is entitled to and claims all damages allowable by law, including injunctive relief, adequate compensation for the infringement, costs, interest, attorney fees, and for the sales of infringing Accused Product as well as the sales of accessory/ancillary products.
- 36. Kustom Signals further seeks a declaration that it is entitled to three times the amount of damages found or assessed pursuant to 35 U.S.C. § 284.

### COUNT II – INDIRECT INFRINGEMENT OF U.S. PATENT NO. 11,194,039

- 37. Kustom Signals incorporates by reference paragraphs 1–24, above, as though fully set forth herein.
- 38. Kustom Signals is the owner by recorded assignment of the '039 Patent, with ownership of all substantial rights therein, including the right to exclude others, to grant licenses, and to sue and recover damages and seek injunctive relief for past and future infringement of the '039 Patent.
- 39. On information and belief, Applied Concepts has induced infringement of and continues to induce infringement of at least claim 9 of the '039 Patent by, among other things, selling, offering to sell, and/or importing the Accused Product for use in combination with traffic radar speed-detection units.
- 40. On information and belief, Applied Concepts has contributed to and continues to contribute to the infringement of at least claim 9 of the '039 Patent by, among other things, selling, offering to sell, and/or importing the Accused Product for use as a component of traffic radar speed-detection units.

- 41. On information and belief, Applied Concepts has sold, offered to sell, and/or imported the Accused Product knowing the same to be especially made or especially adapted for use in infringement of at least claim 9 of the '039 Patent, and not a staple article or commodity of commerce suitable for substantial noninfringing use.
- 42. The Accused Product, used in combination with or as a component of traffic radar speed-detection units, comprises at least:
  - a first radar transceiver configured to transmit and receive radar beams from a front zone corresponding to an area in front of a patrol vehicle and to generate a first electronic signal corresponding to the received radar beam;
  - a second radar transceiver configured to transmit and receive radar beams from a rear zone corresponding to an area behind the patrol vehicle and to generate a second electronic signal corresponding to the received radar beam;
  - a speed determining element configured to receive and process radio frequency signals from a global navigation satellite system to determine and output a speed of the patrol vehicle; and
    - a processing element configured to
    - receive a plurality of digital data samples derived from one of either the first or second electronic signals,
    - receive the speed of the patrol vehicle from the speed determining element,
    - perform a time domain to frequency domain conversion on the digital data samples creating a plurality of frequency bins, each frequency bin associated with a frequency bin number, having a relative magnitude value, and corresponding to a speed of a vehicle,
    - convert the speed of the patrol vehicle to a frequency bin number,

- form a patrol vehicle speed window that includes a range of frequency bin numbers having the frequency bin number of the converted patrol vehicle speed as a center of the range,
- determine at least one group of successive frequency bin numbers outside of the patrol vehicle speed window whose relative magnitude is greater than a spike threshold value,
- convert one frequency bin number in each group to the relative speed of one target vehicle, and
- convert the relative speed of the target vehicle to an absolute speed using the speed of the patrol vehicle.
- 43. Applied Concepts is therefore liable for inducing infringement of the '039 Patent pursuant to 35 U.S.C. § 271(b) and/or contributing to the infringement of the '039 Patent pursuant to 35 U.S.C. § 271(c).
- 44. As a direct and proximate consequence of Applied Concepts' indirect infringement, Kustom Signals has been, is being, and, unless such acts and practices are enjoined by the Court, will continue to be injured in its business and property rights, and has suffered, is suffering, and will continue to suffer injury and damages for which it is entitled to relief under 35 U.S.C. § 284 adequate to compensate for such infringement, including lost profits, but in no event less than a reasonable royalty.
- 45. Applied Concepts' indirect infringement is further causing and will continue to cause Kustom Signals irreparable harm, for which there is no adequate remedy at law. Unless and until enjoined by this Court, Applied Concepts will continue to indirectly infringe the '039 Patent. Under 35 U.S.C. § 283, Kustom Signals is entitled to an injunction against further indirect infringement.

- 46. Additionally, Applied Concepts has received notice and, upon information and belief, knows and has known that its sale, offer for sale, and/or importation of the Accused Product for use in combination with traffic radar speed-detection units induces infringement of at least claim 9 of the '039 Patent and that its sale, offer for sale, and/or importation of the Accused Product for use as a component of traffic radar speed-detection units contributes to the infringement of at least claim 9 of the '039 Patent.
- 47. On information and belief, Applied Concepts has made no attempt to design around the '039 Patent. Applied Concepts' indirect infringement was undertaken willfully and without permission or license to use the '039 Patent.
- 48. On information and belief, Applied Concepts' indirect infringement of at least claim 9 of the '039 Patent has been willful. Kustom Signals has been damaged as the result of Applied Concepts' willful indirect infringement and seeks increased damages, up to and including treble damages.
- 49. Kustom Signals is entitled to and claims all damages allowable by law, including injunctive relief, adequate compensation for the indirect infringement, costs, interest, attorney fees, and for the sales of infringing Accused Product as well as the sales of accessory/ancillary products.
- 50. Kustom Signals further seeks a declaration that it is entitled to three times the amount of damages found or assessed pursuant to 35 U.S.C. § 284.

## COUNT III – DIRECT INFRINGEMENT OF U.S. PATENT NO. 11,703,602

51. Kustom Signals incorporates by reference paragraphs 1–24, above, as though fully set forth herein.

- 52. Kustom Signals is the owner by recorded assignment of the '602 Patent, with ownership of all substantial rights therein, including the right to exclude others, to grant licenses, and to sue and recover damages and seek injunctive relief for past and future infringement of the '602 Patent.
- 53. On information and belief, Applied Concepts has directly infringed and continues to directly infringe at least claim 9 of the '602 Patent by, among other things, using, selling, and offering to sell the Accused Product in combination with its own Stalker radar units.
- 54. The Accused Product, used in combination with Applied Concepts' Stalker radar units, comprises at least:
  - a first radar transceiver configured to transmit and receive radar beams from a front zone corresponding to an area in front of a patrol vehicle or in a rear zone corresponding to an area behind the patrol vehicle and to generate an electronic signal corresponding to the received radar beam;
  - a second radar transceiver configured to transmit and receive radar beams from a rear zone corresponding to an area behind the patrol vehicle and to generate a second electronic signal corresponding to the received radar beam;
  - a speed determining element configured to receive and process radio frequency signals from a global navigation satellite system to determine and output a speed of the patrol vehicle; and
    - a processing element configured to
    - receive a plurality of digital data samples derived from one of either the first or second electronic signals,

- receive the speed of the patrol vehicle from the speed determining element,
- perform a time domain to frequency domain conversion on the digital data samples creating a plurality of frequency bins, each frequency bin associated with a frequency bin number, having a relative magnitude value, and corresponding to a speed of a vehicle,
- convert the speed of the patrol vehicle to a frequency bin number,
- form a patrol vehicle speed window that includes a range of frequency bin numbers having the frequency bin number of the converted patrol vehicle speed as a center of the range,
- determine at least one group of successive frequency bin numbers outside of the patrol vehicle speed window whose relative magnitude is greater than a spike threshold value,
- convert one frequency bin number in each group to the relative speed of one target vehicle, and
- convert the relative speed of the target vehicle to an absolute speed using the speed of the patrol vehicle.
- 55. Applied Concepts is therefore liable for direct infringement of the '602 Patent pursuant to 35 U.S.C. § 271(a).
- 56. As a direct and proximate consequence of Applied Concepts' infringement, Kustom Signals has been, is being, and, unless such acts and practices are enjoined by the Court, will continue to be injured in its business and property rights, and has suffered, is suffering, and will continue to suffer injury and damages for which it is entitled to relief under 35 U.S.C. § 284 adequate to compensate for such infringement, including lost profits, but in no event less than a reasonable royalty.

57. Applied Concepts' infringement is further causing and will continue to cause Kustom Signals irreparable harm, for which there is no adequate remedy at law. Unless and until enjoined by this Court, Applied Concepts will continue to infringe the '602 Patent. Under 35 U.S.C. § 283, Kustom Signals is entitled to an injunction against further infringement.

- 58. Additionally, Applied Concepts has received notice and, upon information and belief, knows and has known that its Accused Product infringes at least claim 9 of the '602 Patent.
- 59. On information and belief, Applied Concepts has made no attempt to design around the '602 Patent. Applied Concepts' infringement was undertaken willfully and without permission or license to use the '602 Patent.
- 60. On information and belief, Applied Concepts' infringement of at least claim 9 of the '602 Patent has been willful. Kustom Signals has been damaged as the result of Applied Concepts' willful infringement and seeks increased damages, up to and including treble damages.
- 61. Kustom Signals is entitled to and claims all damages allowable by law, including injunctive relief, adequate compensation for the infringement, costs, interest, attorney fees, and for the sales of infringing Accused Product as well as the sales of accessory/ancillary products.
- 62. Kustom Signals further seeks a declaration that it is entitled to three times the amount of damages found or assessed pursuant to 35 U.S.C. § 284.

### COUNT IV – INDIRECT OF INFRINGEMENT OF U.S. PATENT NO. 11,703,602

- 63. Kustom Signals incorporates by reference paragraphs 1–24, above, as though fully set forth herein.
- 64. Kustom Signals is the owner by recorded assignment of the '602 Patent, with ownership of all substantial rights therein, including the right to exclude others, to grant licenses, and to sue and recover damages and seek injunctive relief for past and future infringement of the '602 Patent.
- 65. On information and belief, Applied Concepts has induced infringement of and continues to induce infringement of at least claim 9 of the '602 Patent by, among other things, selling, offering to sell, and/or importing the Accused Product for use in combination with traffic radar speed-detection units.
- 66. On information and belief, Applied Concepts has contributed to and continues to contribute to the infringement of at least claim 9 of the '602 Patent by, among other things, selling, offering to sell, and/or importing the Accused Product for use as a component of traffic radar speed-detection units.
- 67. On information and belief, Applied Concepts has sold, offered to sell, and/or imported the Accused Product knowing the same to be especially made or especially adapted for use in infringement of at least claim 9 of the '602 Patent, and not a staple article or commodity of commerce suitable for substantial noninfringing use.
- 68. The Accused Product, used in combination with or as a component of traffic radar speed-detection units, comprises at least:

- a first radar transceiver configured to transmit and receive radar beams from a front zone corresponding to an area in front of a patrol vehicle or in a rear zone corresponding to an area behind the patrol vehicle and to generate an electronic signal corresponding to the received radar beam;
- a second radar transceiver configured to transmit and receive radar beams from a rear zone corresponding to an area behind the patrol vehicle and to generate a second electronic signal corresponding to the received radar beam;
- a speed determining element configured to receive and process radio frequency signals from a global navigation satellite system to determine and output a speed of the patrol vehicle; and
  - a processing element configured to
  - receive a plurality of digital data samples derived from one of either the first or second electronic signals,
  - receive the speed of the patrol vehicle from the speed determining element,
  - perform a time domain to frequency domain conversion on the digital data samples creating a plurality of frequency bins, each frequency bin associated with a frequency bin number, having a relative magnitude value, and corresponding to a speed of a vehicle,
  - convert the speed of the patrol vehicle to a frequency bin number,
  - form a patrol vehicle speed window that includes a range of frequency bin numbers having the frequency bin number of the converted patrol vehicle speed as a center of the range,
  - determine at least one group of successive frequency bin numbers outside of the patrol vehicle speed window whose relative magnitude is greater than a spike threshold value,

convert one frequency bin number in each group to the relative speed of one target vehicle, and

convert the relative speed of the target vehicle to an absolute speed using the speed of the patrol vehicle.

- 69. Applied Concepts is therefore liable for inducing infringement of the '602 Patent pursuant to 35 U.S.C. § 271(b) and/or contributing to the infringement of the '602 Patent pursuant to 35 U.S.C. § 271(c).
- 70. As a direct and proximate consequence of Applied Concepts' indirect infringement, Kustom Signals has been, is being, and, unless such acts and practices are enjoined by the Court, will continue to be injured in its business and property rights, and has suffered, is suffering, and will continue to suffer injury and damages for which it is entitled to relief under 35 U.S.C. § 284 adequate to compensate for such infringement, including lost profits, but in no event less than a reasonable royalty.
- 71. Applied Concepts' indirect infringement is further causing and will continue to cause Kustom Signals irreparable harm, for which there is no adequate remedy at law. Unless and until enjoined by this Court, Applied Concepts will continue to indirectly infringe the '602 Patent. Under 35 U.S.C. § 283, Kustom Signals is entitled to an injunction against further indirect infringement.
- 72. Additionally, Applied Concepts has received notice and, upon information and belief, knows and has known that its sale, offer for sale, and/or importation of the Accused Product for use in combination with traffic radar speed-detection units induces infringement of at least claim 9 of the '602 Patent and that its sale, offer for sale, and/or

importation of the Accused Product for use as a component of traffic radar speeddetection units contributes to the infringement of at least claim 9 of the '602 Patent.

- 73. On information and belief, Applied Concepts has made no attempt to design around the '602 Patent. Applied Concepts' indirect infringement was undertaken willfully and without permission or license to use the '602 Patent.
- 74. On information and belief, Applied Concepts' indirect infringement of at least claim 9 of the '602 Patent has been willful. Kustom Signals has been damaged as the result of Applied Concepts' willful indirect infringement and seeks increased damages, up to and including treble damages.
- 75. Kustom Signals is entitled to and claims all damages allowable by law, including injunctive relief, adequate compensation for the indirect infringement, costs, interest, attorney fees, and for the sales of infringing Accused Product as well as the sales of accessory/ancillary products.
- 76. Kustom Signals further seeks a declaration that it is entitled to three times the amount of damages found or assessed pursuant to 35 U.S.C. § 284.

## PRAYER FOR JUDGMENT AND RELIEF

Based on the foregoing, Kustom Signals respectfully requests that the Court grant judgment and relief as follows:

- (a) Judgment in favor of Kustom Signals that Applied Concepts has directly infringed the '039 Patent;
- (b) Judgment in favor of Kustom Signals that Applied Concepts has induced infringement of the '039 Patent;

- (c) Judgment in favor of Kustom Signals that Applied Concepts has contributed to the infringement of the '039 Patent;
- (d) Judgment in favor of Kustom Signals that Applied Concepts has directly infringed the '602 Patent;
- (e) Judgment in favor of Kustom Signals that Applied Concepts has induced infringement of the '602 Patent;
- (f) Judgment in favor of Kustom Signals that Applied Concepts has contributed to the infringement of the '602 Patent.;
- (g) A preliminary injunction and a permanent injunction enjoining Applied Concepts, its officers, directors, agents, servants, affiliates, employees, divisions, branches, subsidiaries, parents, and all others acting in active concert or privity therewith from directly or indirectly infringing the '039 Patent and/or the '602 Patent Patent pursuant to 35 U.S.C. § 283;
- (h) Judgment in favor of Kustom Signals for all damages it has suffered as a result of Applied Concepts' direct and indirect infringement, including lost profits, costs and expenses, together with pre- and post-judgment interest thereon, and all other damages permitted under 35 U.S.C. § 284, including enhanced damages up to three times the amount of damages found or measured and costs, and in any event an amount no less than a reasonable royalty;

- (i) A determination that this case is exceptional pursuant to 35 U.S.C. § 285;
- (j) A judgment and order awarding Kustom Signals its attorney fees and costs incurred pursuant to 35 U.S.C. § 285; and
- (k) Such other relief as the Court or a jury deems just and proper.

# **JURY DEMAND**

Kustom Signals demands a trial by jury of all matters to which it is entitled to a jury trial under Fed. R. Civ. P. 38.

August 30, 2023

Respectfully Submitted,

## s/ Decker A. Cammack

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